

# MEETING THE AGRICULTURAL LOGISTICS REQUIREMENTS OF ACCOMMODATION ENTERPRISES IN SAKARYA, TURKEY

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## ABSTRACT

*Two of the most important physiological needs of tourists are eating and drinking. It is impossible to have a satisfactory trip without consideration for those critical interests. Tourism enterprises function on the concept of customer satisfaction. Variety in food preparation should be in accordance with the time of the year, location and quality. The aim of this study is to investigate the mutual relationship of agricultural logistics and licensed accommodation enterprises operating in Sakarya, Turkey. The sample of this study includes three facilities of five-star, three facilities of four-star, eight facilities with three-star and one facility with two-star. All facilities are government certified facilities for food and agricultural products. Nineteen tourist markets of agricultural products contributed to the discovery of this study through face-to-face interviews. The findings of the study are the results of discussions with hotel managers and food industry producers. The data obtained for this study is from businesses supplying food and agricultural products to various types of accommodations facilities. Accommodation facilities participating in this study are of different status with different number of rooms and beds. The results indicate that the accommodation facilities give first priority to the agricultural producers surrounding their businesses. None of the participating tourist enterprises uses organic food products.*

**Keywords:** Sakarya, Hotel Business, Food, Agricultural Products, Accommodation Facility, Logistics.

## INTRODUCTION

The estimated number of tourists globally will exceed 1.8 billion people by 2020 and tourism revenues will reach 2 trillion US dollars (Statista, 2018). The development of the tourism industry creates a “win-win situation” with other industries. One of the most important areas affected by the development of the tourism industry is the agricultural industrial area. Food and beverage services constitute the second most important income item in hospitality enterprises (Cianflone and Cardile, 2014). The review of literature shows a lack of research in this topic as it relates to Turkey and particularly in Sakarya. This study describes the data related to the implementation assessment in Sakarya. There were no previous studies on the food-agriculture

product requirements relate to the accommodation enterprises on the regional development. This study provides a descriptive overview of the elements that can help Sakarya's tourism. More specifically, this study's aim is to describe the logistics support contributions of food and agricultural products for accommodation enterprises and tourism industry in Sakarya, Turkey.

## LITERATURE REVIEW

In Turkey, agriculture is a part of the rural area evaluation (Streifeneder, 2016). Rural activities also aim to raise awareness of farmers in environmental issues. In recent years, the concept of the "*green consumer*," which has increased environmental awareness, has taken place in practice. Within this scope, eco-tourism, agro-tourism, agro-eco-tourism and many other similar activities bring rural and urban area settlers together (Pezikoğlu, 2012; Streifeneder, 2016).

The hospitality industry includes the entire range of businesses that provide food and beverage services with accommodation and travel businesses (Türksoy, 2002). According to Ionel (2016), accommodation is the fundamental service in hospitality industry meeting the needs of tourists. Establishment of links between food and local agricultural production-oriented tourism demand maximizes the benefits of the host region (Chand and Slath, 2018; Torres, 2003). In many rural areas, tourism and agriculture are natural part of the socio-economic fabric side by side (Streifeneder, 2016; Fleischer & Tcheticik, 2005). For example, hotel restaurants, banquet rooms, and bars claiming to be one of the most revenue-generating department with a share of 16% to 35% (Chaturvedi, 2017; Maier, 2016; Sökmen, 2003; Mei et al., 2017). The diversity of agricultural products of the country can also positively affect tourism demand for that country. Boosting the links between tourism and agriculture is an essential mechanism to improve the tourism benefits to rural communities (Torres, 2003; Welteji and Zerihun, 2018).

The large-scale dependence on climate and natural resources in both sectors necessitates the construction of tourism and agriculture by considering the dynamics of both sectors (Andersson et al., 2017; Çikin et al., 2009). This leads to an increase in revenues in the agricultural sector and to a better quality of agricultural products (Wang, 2016). At the same time, negative attitudes spread through social media or other mediums can produce negative effects on the tourism and agriculture industry (Yüzbaşıoğlu et al., 2014). Agricultural logistics is the delivery of agricultural products from the producers to the consumers in order to satisfy their demands (Liu, 2016). Agricultural logistics include a combination of activities from farming activities, agricultural production, transportation and distribution (Liu, 2016). "*Agritourism offers farmers the possibility of diversifying and generating additional income through tourism with farm activities to help balance the continuously decreasing income from agricultural activities*" (Streifeneder, 2016). The interaction between tourism and agriculture has recently brought agricultural tourism to the forefront, depending on the geographical and climate structure of our country (Andersson et al., 2017; Çikin et al., 2009).

Agriculture is one of the key components within the whole national economy picture. Turkey has its national advantage with the largest agricultural production is among OECD countries (World Bank, 2018). The significant development of agriculture has created purposefully a powerful push factor for many related industries. Agricultural products quality and productivity will be greatly related to the effectiveness of logistics activities (Wang et al., 2018). Hence, logistics should also be discussed as a major impactful support of agriculture development. Sanches-Pereira et al. (2017) conclude that in Tanzania tourism and agriculture

have an important contribution to the local economic development. Agriculture, which is one of the foundations of Turkey's national and regional economies, is an important sector in Sakarya for its place in economic and social life (TC Sakarya Governorship, 2018). Despite the recent developments in the industry and service sectors, agriculture continues to have a significant share of the economy (Tanrivermis and Bulbul, 2007).

The cultivated land in Sakarya covers about 50% of the province with acreage of 245,356 hectares. The irrigable land is about 93,000 hectares (8% of the total area) and utilizes irrigated farming through the direct usage of irrigation units (Table 1). The most important river passing through the land of the province is the Sakarya River. The agricultural sector is the third sector in the country with a share of 8.1% in the GNP and has an undisputable superiority share of 19% against other sectors (TC Sakarya Governorship, 2018). The total value of agricultural production in Sakarya has increased during 2014 to 2016. The agricultural production is divided into three regions: 1) in the southern districts of Sakarya, cultivation of vegetables and various fruits, 2) in the central part farming and vegetable farming with corn leading and 3) in the north, especially hazelnut farming and animal farming are widely spread throughout Sakarya.

<b>Distribution of Agricultural Lands</b>	<b>Hectare 2014</b>	<b>%</b>	<b>Hectare 2015</b>	<b>%</b>
Farm land	105,476	43	103,077	42
Vegetable land	7,999	3.3	8,436	3.4
Fruit land	7,055	2.9	6,850	2.8
Hazelnut	69,192	28.2	69,084	28.2
Vineyard	3,609	1.5	3,935	1.6
Olive	438	0.2	477	0.2
Poplar tree	9,500	3.9	10,450	4.3
Other	42,087	17.2	43,047	17.5
<b>Total</b>	<b>245,356</b>	<b>100</b>	<b>245,356</b>	<b>100</b>

Source: TC Sakarya Governorship, 2018.

Table 2 indicates that the total value of agricultural production in Sakarya has increased during 2014 to 2016. The agricultural production comes mainly from three regions: (1) in the southern districts of Sakarya, cultivation of vegetables and various fruits; (2) in the central part farming and vegetable farming with corn leading; (3) in the north, especially hazelnut farming and animal farming are widely spread throughout Sakarya.

<b>Production</b>	<b>US\$ (2014)</b>	<b>%</b>	<b>US\$ (2016)</b>	<b>%</b>
Animal Production	194,457,882	44.3	68,273,789	14.0
Fruit Production	143,538,888	32.7	28,284,856	5.8
Field Crops	71,111,008	16.2	138,985,927	28.5
Vegetable Production	28,532,194	6.5	250,662,338	51.4
Mari culture	1,316,870	0.3	1,463,009	0.3
<b>Total</b>	<b>438,956,845</b>	<b>100</b>	<b>487,669,917</b>	<b>100</b>

Source: TC Sakarya Governorship, 2018.

On the other hand, attractiveness in tourism is one of the many reasons for people to make the decision to participate in the tourism movement. The attractiveness element in tourism is divided into two main groups: (1) natural attractiveness, formed without human touch; (2) artificial attractiveness, formed by human contributions (Lee, 2016). Accordingly, the features of natural attractiveness of a tourism destination are climate, beaches, mountains, cultures, landscapes, etc. When a destination can meet the needs of tourists, it will be attractive (Lee, 2016). Sakarya, with its geographic location near the Black Sea coast, is one of the most beautiful provinces of Turkey. Sakarya has the unique ability of hosting all-natural beauties combined mountains, rivers, plains, lakes and highlands. Sakarya has a warm and soft climate. Transportation is through highways, railways and maritime lines (Zengin and Bilgiçli, 2007). Sakarya is one of the important tourism centers of the country with its historical and natural beauties, but is rarely used as an international tourism destination (Marka, 2018). Sakarya is one of the leading provinces of Turkey with its beautiful nature's assets; hence, the province has witnessed an increase in number of domestic tourists staying from 137,567 tourists in 2012 to 330,919 tourists in 2016 (TC Sakarya Governorship, 2018). The number of foreign tourists demand coming to Sakarya from 2012 to 2016 has significantly increased from 7,541 tourists to 28,659 tourists. However, in comparison with the demand from domestic market, it is still yet a major concern (TC Sakarya Governorship, 2018). However, there is a lack of research on the demand of tourism enterprises for agricultural products. This study explores the agricultural logistics and tourism expansion in Sakarya, Turkey.

## METHODOLOGY

This study aims to investigate the mutual relationship between agricultural logistics and licensed accommodation enterprises operating in Sakarya, Turkey. To reach this goal, we interviewed food and beverage managers of the tourism enterprises in Sakarya, Turkey. In addition, we collected consumption data on the amounts of original agricultural products such as rice, sunflower oil, pasta, flour, sugar, and tea in connection with the tourism industry in Sakarya.

The hotels used as samples in the research are as follows: Ottoman, Arya, Baltürk, Limapark, Riada, Ada Elit, and Grand in the Adapazarı district of Sakarya; Seçkin and Elmas in Erenler district; Richmond, Güral, Talia, Aqua, Lale, and Zeliş in Sapanca district; Çakırlar in Taraklı district, Kuzuluk Termal in Akyazı district, and Diamond Carpediem and Karasu Hotels in Karasu district. Face-to-face interviews were held with the related department managers of the above-mentioned hotels.

## RESULTS

The identity of all interviewees of this study is confidential per their request. Results presented in Table 3 indicate that majority of managers (78.9%) interviewed are male. The majority of the managers belong to the 25-35 age groups (89.4%). This infers that enterprises prefer the young and middle age male group at the management level. The survey results about the managers indicate that: a) managers are graduates of secondary education (31.6%), associate degree graduates (63.1%), and university graduates (5.3%); b) the majority has six or more years

(52.6%) of working experience; and c) the vast majority of managers (63.2%) have the ability to manage the purchasing department of their businesses. The managers are very concerned about the product taste and the quality standard of the agricultural products. Managers are familiar with the concept of organic products, but they do not believe in this concept.

<b>Table 3</b>		
<b>DEMOGRAPHIC PROPERTIES OF THE MANAGERS PARTICIPATING IN THE INTERVIEWS</b>		
	<b>N</b>	<b>%</b>
<b>Gender</b>		
Male	15	78.9
Female	4	21.1
<b>Total</b>	<b>19</b>	<b>100.0</b>
<b>Age</b>		
25-30	4	21.0
31-35	13	68.4
36-40	1	5.3
41 and higher	1	5.3
<b>Total</b>	<b>19</b>	<b>100.0</b>
<b>Assignment</b>		
Purchasing Manager	12	63.2
Operations Manager	5	26.3
General Manager	2	10.5
<b>Total</b>	<b>19</b>	<b>100</b>
<b>Education Level</b>		
Secondary Education	6	31.6
Associate's Degree	12	63.1
Bachelor's Degree	1	5.3
<b>Total</b>	<b>19</b>	<b>100.0</b>
<b>Experience</b>		
1-5 years	3	15.8
6-10 years	10	52.6
11-15 years	3	15.8
16-20 years	3	15.8
<b>Total</b>	<b>19</b>	<b>100.0</b>
<b>Marital Status</b>		
Married	16	84.2
Single	3	15.8
<b>Total</b>	<b>19</b>	<b>100</b>

As for the enterprises participating in this study, we have the following information: (1) 15.8%, 15.8%, 42.1%, and 5.3% of them have 5, 4, 3, and 2 stars, respectively, and 21% of them have not special facility status; (2) 84.2% of the enterprises are owned by the private sector and 15.8% are owned by national chains. International chain enterprises have no share of the market in Sakarya. The results also indicate that all of the enterprises have their own procurement policies. The priorities of most of them are factors such as price, quality, continuity, trust, and return of guests. The enterprises in the survey prefer to do business with places located in Sakarya. Some facilities operating in Sapanca and Kocaeli district stated that they prefer a large market chain because of their distance convenience, diversity, and ease of payment (cash discounts, long-term checks, etc.). Hotel enterprises in Sakarya need a facility that provides

diversity and payment facilities. The price, quality, continuity, after-sales service, and trust factors play important roles in the purchase policies. They also play important roles in the preferences of the hotel enterprises in Sakarya province.

Enterprises operating in Sakarya consume a large amount of basic food products. Egg and meat consumption are the highest among these values. Monthly average consumption of the enterprises is as high as 82,305 kg/dL/lit as a contribution to the provincial economy. The managers of all hotel operations stated that the diet menu or vegetarian menu was not constantly included in the business services; but that they were produced on demand and in the direction of the customer demand and that the stock of materials was constantly being produced at the production point. Enterprises with the highest consumption rates are five-star hotels, depending on the number of rooms and the number of beds. Egg is an essential ingredient in the production of baked goods and for personal use. Yearly consumptions are about 435,840 eggs, 74,940 kg tomato, 85,000 kg fruits, 110,000 kg meat, and 50,000 kg flour.

### **CONCLUSIONS, IMPLICATIONS AND SUGGESTIONS**

Tourism is a powerful force for the development of national economic and employability (Sanches-Pereira et al., 2017). The aim of this study is to investigate the mutual relationship between agricultural logistics and licensed accommodation enterprises operating in Sakarya, Turkey. The findings of the study show that the consumption amounts of tourism enterprises manufacturing agricultural and animal products such as tomatoes, fruits, potatoes, onions, eggs, and meat are parallel with the size of the operator and the number of star ratings for tourist accommodations. The highest consumed product is egg, because eggs have direct usage and indirect usage such as in the production of baked goods. Tomatoes, onions, potatoes and meat are the most consumed products after eggs. For processed agricultural products, the preference of the enterprises is the products produced in the region. Specifically, purchasing of large volume products such as sunflower oil and rice in Sakarya stand out. The findings show that if the tourism potential in the region is increased, tourism business investments will increase and naturally, this will increase the consumption of agricultural and animal products. Increased production will also affect the quality of the production positively.

The number of four- and five-star hotels in Sakarya needs to be increased. The increase in the number of four- and five-star hotels will increase and improve the quality and quantity of agricultural products in Sakarya. Furthermore, the development of alternative tourism opportunities in the province of Sakarya will enable the cooperation of agricultural and tourism areas as well as the adoption of the developmental culture. Nowadays we are dealing with informed tourist masses that know and research what they want with the support of the social media and e-marketing (Moslehpour et al., 2018).

The share of the logistic needs of the tourism enterprises operating in Sakarya is very high in the agricultural economy. If the agricultural product demands of the tourism enterprises are not covered by the businesses in the immediate vicinity, Sakarya could suffer great losses in economic production and income. The findings of this study indicate that, the tourism enterprises' full agricultural product needs are not covered from the facilities located in the immediate vicinity. However, the benefit of providing all the needs of tourism enterprises from the businesses operating in the province of Sakarya will be a great and important factor for the local economy and tourism.

The results of the study and suggestions to facilitate the operation of agritourism are as follows: (1) tourism, as an economically active sector in Sakarya, should span over twelve months. Appropriate methods and policies should ensure that those who work in businesses that provide the logistical needs of tourism enterprises are not affected by the seasonal fluctuations of the demand for tourism; (2) Sakarya has the positions and assets to host different types of tourism. However, the following factors can affect the occupancy and consequently food-agriculture product requirements: tourism sales strategies, efforts to reduce costs, unwillingness to take risks and working without expert personnel due to lack of consideration and experience for alternative tourism cultures. It is necessary to eliminate these deficiencies to reach the operating environments for the capacities of the enterprises; (3) despite the fact that the values forming the geographical supply elements in Sakarya are high; these values are not used enough. The elimination of these deficiencies can be a unifying element of tourism and agriculture, both of which use nature as a common resource; (4) there are three 5-star hotels in Sakarya. Having a small number of five-star hotels is a major drawback. Especially, it is important to note that Sakarya does not have a 5-star hotel on the Black Sea coast; (5) Having a sufficient amount of high-quality facilities in demand and support of agricultural products may increase the investments of tourism enterprises; (6) it appears that the demand for agricultural products has increased in parallel with the number of stars of the operator. Accordingly, it may be important for the sustainability of the business and the future of the establishment, preparing the necessary environment and taking the required initiatives to increase the existing star status of the facilities in Sakarya; (7) none of the hotel enterprises interviewed chosen use organic agricultural products due to cost considerations. Nowadays, considering that customers could demand organic products, the procurement of organic products should be able to take part in the supply policies of the facilities; (8) none of the hotel enterprises involved in the interview make any attempt to present local cuisine. Within the scope of the service provided to tourists coming to the region, presentations and workshops to introduce the regional cuisine culture may increase the number of tourists and increase the recalling of the taste, which can be beneficial for Sakarya; (9) depending on technological developments, in this era of the internet, by using strong points of regional attraction, through the usage of food and agricultural products, can be emphasized in terms of business and corporations for the promotion of Sakarya by presenting promotional films prepared with visual effects supplemented by a few language options.

This study included facilities with tourism operation certificates operating in Sakarya. The results of the study may not show the full extent of the impact for food agriculture in Turkey. The results of this study may be used as a starting point to guide for later studies. Future studies can be carried out in facilities with a tourism operation certificate in Sakarya as well as the municipal certified facilities. The inclusion of both types of facilities can assist the tourism enterprises to forecast the demand for agricultural products. Furthermore, this value can be calculated as the economic value through calculation with the average market prices.

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## REFERENCES

- Andersson, T.D., Mossberg, L., & Therkelsen, A. (2017). Food and tourism synergies: Perspectives on consumption, production and destination development. *Scandinavian Journal of Hospitality and Tourism*, 17(1), 1-8.
- Cianflone, E., & Cardile, G. (2014). Local agricultural products in tourism: Strutt's account of Sicilian pricey pears. *Geo Journal of Tourism and Geosites*, 13(1), 10-16.
- Çikin, A., Çeken H., & Ucar, M. (2009). The effect of tourism on agricultural sector. Agro-tourism and economic results. *Journal of Agricultural Economics*, 15(1), 1-8.
- Chand, M., & Slath, A. (2018). Impact of food and beverage service practices on customer satisfaction in the food outlets, Chandigarh, India. *International Journal of Hospitality and Tourism Systems*, 11(2), 73-81.
- Chaturvedi, A. (2017). Food and beverages accounts for bigger slice of hotel revenue pie. *The Economic Times*. Retrieved from: [www1.economictimes.indiatimes.com/articleshow/msid-471364,prtpage-1.cms](http://www1.economictimes.indiatimes.com/articleshow/msid-471364,prtpage-1.cms)
- Fleischer, A., & Tcheticik, A. (2005). Does rural tourism benefit from agriculture? *Tourism Management*, 26(4), 493-502.
- Ionel, M. (2016). Hospitality industry. *Ovidius University Annals: Economic Sciences Series*, 1(1), 187-191.
- Lee, C.F. (2016). An investigation of factors determining industrial tourism attractiveness. *Tourism and Hospitality Research*, 16(2), 184-197.
- Liu, H. (2016). Research and analysis of shanghai agricultural logistics. *American Journal of Industrial and Business Management*, 6(07), 835-839.
- Marka. (2018). Retrieved from: <http://www.marka.org.tr/anasayfa>
- Maier, T.A. (2016). Convention hotel food and beverage operating efficiency profile. *Journal of Foodservice Business Research*, 19(5), 514-524.
- Mei, X.Y., Lurfald, M., & Bråtå, H.O. (2017). Networking and collaboration between tourism and agriculture: Food tourism experiences along the National Tourist Routes of Norway. *Scandinavian Journal of Hospitality and Tourism*, 17(1), 59-75.
- Moslehpour, M., Pham, K.V., Wong, W.K., & Bilgiçli, I. (2018). E-Purchase intention of Taiwanese consumers: Sustainable mediation of perceived usefulness and perceived ease of use. *Sustainability*, 10(1), 1-17.
- Pezikoğlu, F. (2012). Sustainable agriculture, rural development and the concept of rural development: Agriculture-tourism-rural area relationship and results. *KMÜ Journal of Social and Economic Research*, 14(22), 83-92.
- Tanrivermis, H., & Bulbul, M. (2007). The Role of agriculture in Turkish economy at the beginning of the European union accession negotiations. *Journal of Applied Sciences*, 7(1), 612-625.
- Sanches-Pereira, A., Onguglo, B., Pacini, H., Gomez, M., Coelho, S.T., & Muwanga, M.K. (2017). Fostering local sustainable development in Tanzania by enhancing linkages between tourism and small-scale agriculture. *Journal of Cleaner Production*, 162(1), 1567-1581.
- Sökmen, A. (2003). *Food and beverage management in hospitality industry*. Ankara: Detay Publications.
- Statista. (2018). *Global tourism industry: Statistics & Facts*. Retrieved from: <https://www.statista.com/topics/962/global-tourism/>
- Streifeneder, T. (2016). Agriculture first: Assessing European policies and scientific typologies to define authentic agritourism and differentiate it from countryside tourism. *Tourism Management Perspectives*, 20(1), 251-264.
- TC Sakarya Governorship (2018). Retrieved from <http://www.sakarya.gov.tr/>
- Torres, R. (2003). Linkages between tourism and agriculture in Mexico. *Annals of Tourism Research*, 30(3), 546-566.
- Türksoy, A. (2002). *Food and beverage services management*. Ankara: Turhan Book Publishing.
- Wang, W. (2016). Research and analysis on agricultural logistics of sulfites. *American Journal of Industrial and Business Management*, 6(6), 790-793.
- Wang, Y., Wu, W., & Wang, S. (2018). Research on the development of agricultural products logistics in China based on ISM model. *International Journal of Internet Manufacturing and Services*, 5(1), 22-57.
- Welteji, D., & Zerihun, B. (2018). Tourism agriculture nexuses: Practices, challenges and opportunities in the case of bale mountains national park, Southeastern Ethiopia. *Agriculture & Food Security*, 7(1), 1-8.

World Bank (2018). Retrieved from <https://data.worldbank.org/indicator>

Yüzbaşıođlua, N., Topsakalb, Y., & Çelick, P. (2014). Roles of tourism enterprises on destination sustainability: Case of Antalya, Turkey. *Procedia-Social and Behavioral Sciences*, 150(1), 968-976.

Zengin, B., & Bilgiçli, İ. (2007). *Marketability of Sakarya spaces from tourism: Problems and solutions*. National Tourism Congress of Turkey, University of Sakarya, Karasu Vocational School.

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